<center>REMARKS</center>

The present application was filed on November 26, 2003 with claims 1-20. Claims 1-20 are currently pending in the application. Claims 1, 19 and 20 are the independent claims.

The specification was objected to due to the length of the abstract.

Claim 20 is objected to due to an informality.

Claim 20 is rejected under 35 U.S.C. §101 as being directed to non-statutory subject matter.

Claims 1-19 are rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 7,120,153 (hereinafter "Anconetani").

Claim 20 is rejected under 35 U.S.C. §103(a) as being unpatentable over Anconetani in view of U.S. Patent No. 7,085,279 (hereinafter "Kumar").

In this response, Applicants amend the specification and claims to address the objections, traverse the §101 and §103(a) rejections, and respectfully request reconsideration of the present application.

The abstract has been amended and does not exceed 150 words in length.

Claim 20 has been amended to address the informality by providing appropriate antecedent basis for the recited first and second tables.

With regard to the §101 rejection, Applicants respectfully traverse. Independent claim 20 as originally filed recited an article of manufacture comprising a machine-readable storage medium storing one or more software programs that, when executed, implement one or more steps producing a useful, concrete and tangible result. Such a claim is believed to recite statutory subject matter. See, e.g., In re Beauregard, 53 F.3d 1583; 35 USPQ2d 1383 (Fed. Cir. 1995); In re Lowry, 32 F.3d 1579, 32 USPQ2d 1031 (Fed. Cir. 1994). Notwithstanding the traversal, Applicants have amended independent claim 20 without prejudice, solely in order to expedite prosecution of the application by conforming to the subjective preference indicated by the Examiner.

With regard to the §103(a) rejection over Anconetani, Applicants initially note that a proper *prima facie* case of obviousness requires that the cited references must teach or suggest all the claim limitations, and that there be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify

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or combine the reference teachings. See Manual of Patent Examining Procedure (MPEP), Eighth Edition, August 2001, §706.02(j).

Applicants submit that the Examiner has failed to establish a proper *prima facie* case of obviousness in the §103(a) rejection of claims 1-19 over Anconetani, in that the cited reference fails to teach or suggest all the limitations of these claims, and in that no cogent motivation has been identified for modifying the reference teachings to reach the claimed invention. Moreover, even if it is assumed for purposes of argument that a *prima facie* case has been established, there are teachings in the Anconetani reference that overcome any such *prima facie* case by directly teaching away from the claimed invention.

Independent claim 1 is directed to a processor comprising scheduling circuitry and associated memory circuitry. The scheduling circuitry is operative to schedule data blocks for transmission from a plurality of transmission elements, and is configurable for utilization of at least a first table and a second table, stored at least in part in the memory circuitry, in scheduling the data blocks for transmission. The first table is configurable to include at least first and second lists of entries corresponding to transmission elements for which data blocks are to be scheduled in accordance with at least a first scheduling algorithm, with the scheduler being operative to maintain a first table pointer identifying at least one of the first and second lists of the first table as having priority over the other of the first and second lists of the first table. The second table recited in claim 1 is configurable to include a plurality of entries corresponding to transmission elements for which data blocks are to be scheduled in accordance with at least a second scheduling algorithm different than the first scheduling algorithm, where association of a given one of the transmission elements with a particular one of the entries establishes a scheduling rate for that transmission element. Furthermore, the scheduler maintains a second table pointer identifying a current one of the second table entries as being eligible for transmission.

In an illustrative embodiment described in conjunction with FIGS. 3, 4 and 5 of the drawings, the first and second tables of claim 1 are shown, by way of example, as FIFO lists 310 and dynamic calendar table 312. A given queue or other transmission element having at least one data block to transmit can be scheduled either in one of the FIFO lists or in the dynamic calendar table. Thus, at a particular point in time, the given queue may be empty, that is, have no data block to transmit, or may be scheduled via one of the FIFO lists or the dynamic calendar

table. This advantageously allows multiple scheduling algorithms to be supported in an efficient and flexible manner. For example, the FIFO lists 310 may be used to implement a weighted fair queuing algorithm, while the dynamic calendar table 312 may be used to implement a constant bit rate or variable bit rate scheduling algorithm. See the specification at, for example, page 9, line 17, to page 12, line 13.

The Examiner in formulating the §103(a) rejection of claim 1 over Anconetani argues with reference to FIG. 11 of Anconetani that the recited first table is met by the calendar table 206 and the recited second table is met by the context table 202. See the Office Action at page 3, section 6, second paragraph. However, the context table 202 of FIG. 11 in Anconetani clearly does not meet the limitations of the second table recited in claim 1. For example, as noted above, claim 1 expressly states that the second table includes <u>a plurality of entries corresponding to transmission elements for which data blocks are to be scheduled in accordance with at least a second scheduling algorithm different than the first scheduling algorithm</u>. The context table 202 does not include entries that correspond to transmission elements for which data blocks are to be scheduled in accordance with a second scheduling algorithm as recited. To the contrary, the context table 202 comprises information, such as the peak rate and the maximum number of simultaneous calendar entries in calendar table 206, <u>that is used by the calendar table 206 in scheduling cells for transmission</u> in accordance with a given scheduling algorithm. See Anconetani at, for example, column 9, lines 48-55, and column 10, lines 41-46. The context table 202 thus basically appears to provide what is generally referred to in the art as traffic shaping information. See Anconetani at, for example, column 7, lines 33-44, and the present specification at, for example, page 9, lines 7-16. The context table 202 does not constitute a scheduling mechanism that implements a second scheduling algorithm different than that implemented by the calendar table 206.

It is also important to note that claim 1 further expressly describes the recited second table as a table in which <u>association of a given one of the transmission elements with a particular one of the table entries establishes a scheduling rate for that transmission element</u>. This limitation is clearly not met by the context table 202 of FIG. 11 in Anconetani. In the above-noted illustrative embodiment of the invention, an example of the recited association can be seen in the storage of an identifier of a particular transmission element in a certain slot of the dynamic calendar table 312. More specifically, as described in conjunction with FIG. 5 of the drawings in

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the present application, a scheduling rate of one-sixth of the total table rate is established for queue Q1 by assigning one of six available slots in the table 312 to that queue. See the specification at, for example, page 11, lines 14-24. In the recited second table set forth in claim 1, it is this type of association of a given one of the transmission elements with a particular one of the table entries that establishes a scheduling rate for that transmission element. The context table 202 of Anconetani does not establish scheduling rates in this manner but instead simply stores a designated peak rate and other traffic shaping information that is utilized by the calendar table 206 in implementing its scheduling algorithm.

Applicants further note that claim 1 specifies that the scheduler maintains a second table pointer identifying a current one of the second table entries as being eligible for transmission. As noted above, the Examiner argues that the recited second table is met by the context table 202 of FIG. 11 in Anconetani. However, this table does not include entries of the type recited, that is, entries that correspond to transmission elements for which data blocks are to be scheduled in accordance with a scheduling algorithm different than that used by the calendar table 206. Thus, Anconetani further fails to teach or suggest the maintenance of a second table pointer that identifies a current one of the second table entries as being eligible for transmission. An example of a second table pointer of the type recited can be seen in the current pointer shown in FIG. 5 of the present application. It is apparent from FIG. 11 of Anconetani that context table 202 contains traffic shaping information that is used by the calendar table 206 to perform scheduling operations, but it does not contain entries that correspond to transmission elements, nor does it maintain a pointer to identify a current one of the entries as being eligible for transmission. The entries of the context table 202 in Anconetani cannot be said to be eligible for transmission as recited, given that such entries do not identify transmission elements that transmit data blocks.

Applicants further traverse the use of Official Notice with regard to the recited first and second pointers. The recited pointers are particular types of pointers, not simply pointers in general, and the use of Official Notice to attempt to meet these claim elements is believed to be inappropriate. For example, the recited first table pointer identifies one of the first and second lists of entries of the first table as having priority over the other of the first and second lists of entries. The recited second table pointer identifies a current one of the second table entries as being eligible for transmission. The Official Notice relates to the use of pointers "to identify the

packets ready for transmission" and thus fails to meet the particular recited first and second table pointers of claim 1.

Accordingly, it is believed that the teachings of the Anconetani reference fail to meet the limitations of independent claim 1.

Furthermore, it is believed that insufficient objective evidence of motivation to modify Anconetani has been identified by the Examiner. The Examiner at page 4, paragraphs 3 and 4, of the Office Action argues that one skilled in the art would be motivated to modify Anconetani to reach the particular limitations of claim 1 because "the use of pointers is known to provide smaller and faster algorithm execution in the memory of devices."

Applicants respectfully submit that the proffered statement fails to provide sufficient objective motivation and is instead a conclusory statement of the sort rejected by both the Federal Circuit and the U.S. Supreme Court. See KSR v. Teleflex, 127 S. Ct. 1727, 1741 (2007), quoting In re Kahn, 441 F. 3d 977, 988 (Fed. Cir. 2006) ("[R]ejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness."). As noted above, the particular pointer limitations of claim 1 are not met by Anconetani, and the proffered conclusory statement regarding the general use of pointers in memory fails to supplement this fundamental deficiency of Anconetani as applied to claim 1.

It should also be noted that Anconetani appears to teach away from the recited arrangements, by teaching the use of a single scheduling table, namely calendar table 206. The context table 202 is not a scheduling table that is used to implement a different scheduling algorithm than that implemented by the calendar table 206, but instead simply provides context information that is used as traffic shaping input to the scheduling algorithm implemented by the calendar table 206. This use of a single scheduling table is believed to be a direct teaching away from the claimed invention, and clearly fails to provide the above-noted significant advantages that are attributable to the invention.
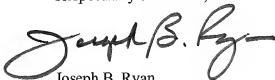
Independent claim 1 is therefore believed to be patentable over Anconetani.

Independent claims 19 and 20 are believed patentable for reasons similar to those outlined above with regard to claim 1. The Kumar reference as applied to claim 20 fails to supplement the above-identified fundamental deficiencies of the Anconetani reference.

Dependent claims 2-18 are believed allowable for at least the reasons identified above with regard to claim 1, and are also believed to define separately-patentable subject matter.

In view of the foregoing, claims 1-20 are believed to be in condition for allowance.

Respectfully submitted,

Date: November 20, 2007

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